

In reference to the last two lines of the abstract, we confirm that: no hydraulic or electronic devices are no longer used as hydraulic control mean, because the change from the mechanical way of transmitting the torque from the engine to the driving wheels to the hydraulic way is determined by the capacity of the hydraulic torque converter itself in surpassing the automobile torque demand, after it has been moved first by means of a mechanical device in which the transmission ratio is higher. (The transmission ratio of a hydraulic torque converter of 3 elements (pump, turbine and reactor) is commonly 2,1 to 1, and the mechanical transmission ratio of the mechanical torque converter used in the present transmission is commonly 3 to 1.

At starting time (when moving the automobile from resting state) it is needed a higher transmission ratio than that supplied by the hydraulic torque converter (turbine and pump slide one to another) because of two main reasons:

- 1) The oil toric flow inside the hydraulic converter is too weak for moving the turbine T
- 2) The transmission ratio of a hydraulic torque converter is lower than required at this specific momentum.

After the automobile is moved at normal driving conditions less torque is needed then, the ring gear 5 FIG 1 beguines to turn in the same direction as the sun gear does because of the effect of the free wheel 11. Said free wheel assumes the work of any hydraulic device for controlling any change in the torque ratio of the whole mechanism in cooperation with the hydraulic torque converter and this is, what is new in the present invention.

The word "complement" is correct under our point of view taken into account that the work made by the mechanical torque converter is supported or helped into certain limits by the work made by the hydraulic torque converter. The word "compliment,"

pointed out in the detailed action means a formal expression of respect, affection or admiration that has nothing to do with technical explanations.

The word "works" was replaced by "work"

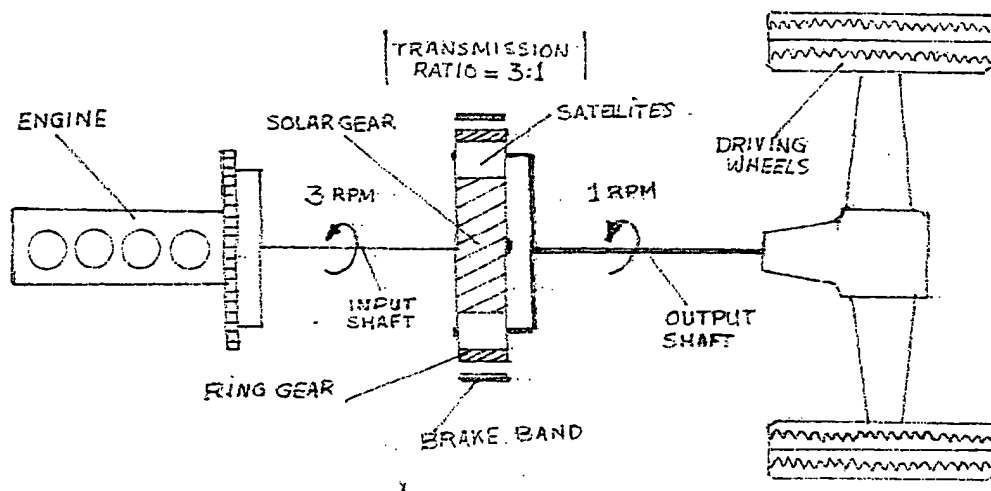
The last two lines of the abstract are correct because no control takes place by means of any hydraulic or electronic devices for changing the torque ratio. The real "brain"(let us use the word brain) is the mechanical connection between the rings gear 5 FIG 1 with the free wheel 11.

At starting time (that is, when the automobile begins to move from resting state) some considerations must be taken into account:

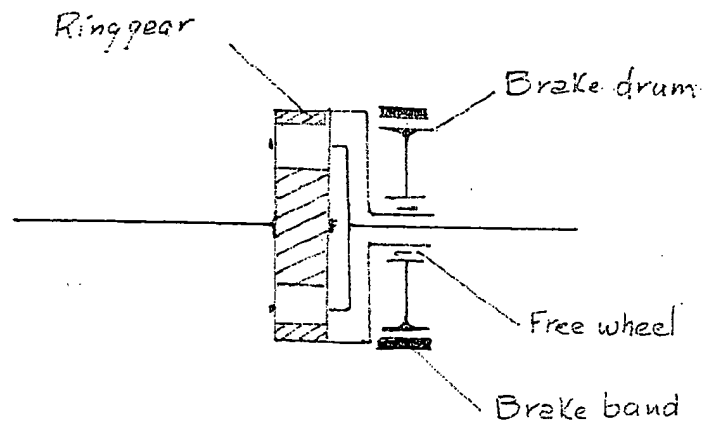
- I- The oil toric flow (the movement of oil particles inside the hydraulic converter) is too weak for moving the turbine T FIG 1 at engine speeds below 900-1200 rpm.
- II- The hydraulic converter capacity is not enough for moving the driving wheels by itself. (The ordinary transmission ratio of a hydraulic torque converter of 3 elements is generally 2,1 to 1) and at starting time a higher transmission ratio is required.
- III- A planetary gear system (epicyclical gears) of a required transmission ratio (ex: 3,4 to 1) is needed at starting time.
- IV- When the brake 7, FIG 1 is engaged, the sun gear rotation (and NOT any of the elements of the planetary set) is higher than the other ones and of course it is right, since the sun gear is directly connected to the engine output shaft.

If a brake band is directly applied to the ring gear, the intake shaft will rotate 3 times higher than the output shaft and no change in the transmission ratio is produced if the

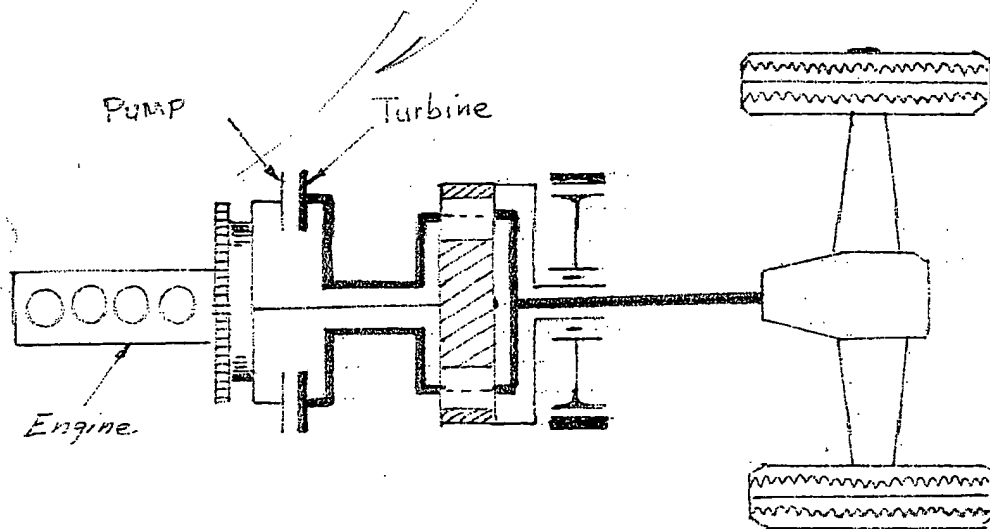
ring gear is stopped in both senses (right and left).



If a brake band is NOT applied directly to the ring gear but to a free wheel located between said ring gear and to a brake drum then, such a ring gear rotation is free in one sense and is stopped at the opposite direction.



After been moved, a lower transmission ratio is enough for moving the automobile, which is available at the hydraulic torque converter.



Turbine T is connected in a permanent way to the satellites frame (carrier). If a brake band is applied directly to the ring gear, no torque change will take place BUT if a brake band is applied to the free wheel drum said ring gear could move itself freely in one direction and the mechanisms will not be blocked.

On the other hand, when two members of a planetary gear set rotate at the same speed, the third member will rotate at the same speed then, the mechanism will turn as a whole.

Taken into account the above reasoning, the classic "valves body" or the so-called "hydraulic brain" now is not necessary because the combination of a free wheel connected to a planetary ring gear takes its place and that is what is new. No other control mean is necessary (ex: electronic devices). No multi disk clutches are neither necessary for connecting said mechanical elements because the connection is permanent among them.

As it was said before, when the transmission ratio supplied by the hydraulic torque converter is not enough for moving the automobile, turbine T and pump P slides one